DOCUMENT RESUME

ED 134 958 CS 003 215

AUTHOR Curry, Jane Helen
TITLE An Analysis of The Reading Achievement Scores of Students Attending A Four-Quarter Elementary Schcol.
PUB DATE 76
NOTE 8p.; Paper presented at the Annual Meeting of the International Reading Association Far West Regional Conference (4th, Honolulu, July 29-31, 1976)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Attendance; Elementary Education; *Quarter System; *Reading Achievement; *Reading Research; *School Calendars

ABSTRACT

This study investigated the relationship between the number of days spent in an elementary classroom and the reading achievement scores of pupils. Pupils attending a four-quarter, public elementary schcol for 200 days a year, kindergarten through sixth grade, were ccmpared in reading with pupils attending school for 175 days per year; scores for a period of four years were analyzed. Of the 38 grade-and-year comparisons made, four comparisons were significant for the control-school pupils and two comparisons favored the experimental pupils. No consistent pattern was revealed which favored the pupils of the 200-day-calendar school. (AA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED134958

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"An Analysis of The Reading Achievement Scores of Students Attending A Four-Quarter Elementary School"

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY

Jane Helen Curry

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

Jane Helen Curry, Ed.D.
Hayward Unified School District
P.O. Box 5000
Hayward, California 94540

AS 003 215

Nearly all school districts in the United States follow a traditional calendar schedule, opening school in September, and closing in June for a vacation period of 12 weeks. Originally this calendar was devised to fit the needs of families who lived in rural settings and whose economic livelihood was dependent on agriculture. The calendar allowed pupils to be present at home for planting, cultivation and harvesting of crops.

Some school districts have attempted to break away from this traditional agriculturally-based calendar and move toward a new kind of calendar with school in session all year. These districts have felt that individuals in modern society need many short breaks, instead of one long vacation. There have been a variety of plans advanced for new calendars: four quarters of school; 45 days of school, then 15 days of vacation; etc.

The purpose of this study was to investigate the relationship between the number of days spent in an elementary classroom and reading achievement scores of pupils.

Pupils attending a four-quarter, public, elementary school for 200 days a year, grades kindergarten through sixth grade, were compared in reading with pupils attending school for 175 days per year and these scores were analyzed for a period of four years.

There were 3 hypotheses which were tested in the study:

1. There is no significant difference in reading achievement scores of pupils who attend school for 200 days per year when compared to pupils who attend school for 175 days per year.

2. There is no significant difference in reading achievement of boys who attend school for 200 days per year when compared to boys who attend school for 175 days per year.

3. There is no significant difference in reading achievement of girls who attend school for 200 days per year when compared to girls who attend school for 175 days per year.

Two assumptions made were that the instruments used in the study were valid for the purpose outlined, and the information contained in district records was accurate.

There were 3 delimitations:

1. The study was confined to one suburban school district in the San Francisco Bay Area. One school in the district, using a calendar of 200 days, was compared with 12 other schools in the district with similar characteristics which followed a calendar of 175 days.

2. First grade students were excluded from the study. Under the extended calendar of 200 days, first graders do not enter school until October, whereas traditional calendar students enter schools early in September.

3. Intelligence test scores were available for sixth grade pupils only from a group test.

Limitations of the study were as follows:

1. Test scores were subject to the validity and reliability of the instruments.

2. Teachers employed at schools used in the study were selected for the study on a random basis.

3. All achievement measures were administered by the classroom teachers.

4. Some elements within the backgrounds of individual school students could not be controlled.

Data gathered for the study were obtained from the computer reports published by the Research and Evaluation Office of the District. Because of the requirements of federal programs and the computer facilities, individual pupil scores are available in district records. Once the data was gathered, the district's Honeywell computers were used for analysis, using program BANOVI.

A review of research indicated that many descriptive articles were written describing various kinds of extended calendars school plans and programs, but little research was available which attempted to find a relationship between time spent in school and academic achievement.

Also, the literature indicated a cyclical popularity for extended calendar schooling. At about the time of the First World War, all-year schools were attempted in several cities. Large numbers of immigrant and rural people were filling city schools and it was felt that one way for these individuals to catch up academically was to have them attend school all year. When the economic depression of the 30's occurred, many pupils dropped out of school and school districts lacked the funds needed to finance all-year schools, so the all-year schools returned to their traditional calendars.

After the Second World War, when enrollments began to boom, many school districts again examined the all-year concept. However, most districts adopted double-sessions instead of extending the calendar.

Recently, the concept of the all-year school has reappeared. Taxpayers are pressuring for a better return on their tax dollars. Some districts experiencing growth are preferring to make better use of their present facilities instead of building new facilities. A general concern has arisen for assisting urban pupils who have little to do during the summer vacation when alone at home. These, plus other concerns, have led to some school districts revising their calendars and this is reflected in the literature.

On October 1, 1968, the school in the study used as the experimental school, began operation as a year-round four-quarter school. The school year began with the fall quarter in October. The second quarter began in January and extended until March. The third quarter began in April and lasted until June when all district schools closed for the summer. The summer quarter began in July and continued until September.

Between each quarter there were 3 weeks of vacation for each pupil. Teachers were required to use a certain number of the days during the 3-week period for preparation and inservice. During the year pupils in the four-quarter school had the same holidays as pupils in the traditional calendar schools: 2 days at Thanksgiving, 2 weeks at Christmas, one week at Easter, etc.

The summers in the school areas are cool and foggy, so the climate is conducive to full schooling during the summer.

The school district used in the study had been discussing the idea of extending the school calendar for some time. It was felt that in the community there was little for pupils to do during their vacation periods. Also it was felt that with the expansion of knowledge in many subject areas, pupils would benefit from extended school experiences. The initial proposal for the program was submitted as a Title III application to the State Department of Education.

The twelve schools selected for comparison with the experimental school were located in the same school district. These schools followed the traditional 175 day calendar. The control schools had some of the same characteristics as the experimental school. Some of these characteristics which were similar were:

1. Total enrollment, 1969-1972.

2. Racial and ethnic distribution of students, 1969-1972.

3. Verbal and non-verbal test scores of sixth grade pupils on Lorge-Thorndike, November 1972.

4. Scores of fourth grade students on California Test of Basic Skills, Grade 4, Fall 1973.

5. Percentage of students receiving Aid to Families with Dependent Children or from Boarding Homes and Institutions Fund (welfare) 1970-1972.

6. Analysis of mean family income as shown by 1970 census.

7. Number of free lunches served 1972-1973.

8. Mobility of students as determined in a survey done by the District in 1971.

When analysis of variance was applied to each of these variables, a significance of .05 occurred only for the number of Spanish-surnamed students, favoring control schools, a part of the racial and ethnic survey or characteristic 2. On all the other variables there was no significant difference between the experimental and the control schools and their students.

The staffs of the experimental and control schools were compared too. The variables used for comparison were:

1. Racial and ethnic background of teaching staffs in 1969.

2. Number of years each teacher had taught at the school used for comparison as of June, 1973.

3. Number of years each teacher was employed in the district as of June, 1973. (Many teachers in the district have taught at more than one school.)

4. Year BA degree received.

5. Year advanced degree received.

6. Number of units above BA degree.

When analysis of variance was applied, no significant differences were found between the staff at the experimental school and the staffs at the control schools.

All schools in the district were required to follow the same curriculum outline and use the same materials regardless of calendar. Special State funding was required to operate the four-quarter school, and as a part of this funding the State required that the experimental school follow the same curriculum and use the same materials as other schools in the district under the traditional 175-day calendar.

Test results from the following instruments were used in the study:

YEAR		GRADE	INSTRUMENT
1969	May	3	Stanford Achievement Test
	October	4	California Test of Basic Skills
	October	5	California Test of Basic Skills
	October	6	California Test of Basic Skills
1970	May	2	Stanford Achievement Test
	May	3	Stanford Achievement Test
	October	4	California Test of Basic Skills
	October	5	California Test of Basic Skills
	October	6	California Test of Basic Skills
1971	May	2	Cooperative Primary Reading Test
	May	3	Cooperative Primary Reading Test
	October	4	California Test of Basic Skills
	October	5	California Test of Basic Skills
	October	6	California Test of Basic Skills
1972	May	2	Cooperative Primary Reading Test
	May	3	Cooperative Primary Reading Test
	October	4	California Test of Basic Skills
	October	5	California Test of Basic Skills
	October	6	California Test of Basic Skills

For each instrument, total reading scores for individual pupil rather than subtest scores were used for analysis.

A one-way analysis of variance was used to compare the data, and to determine significant differences at the .05 or .01 level of confidence. Honeywell computer program BANOVI was used for the analysis. The results of the scores for 1969 were as follows:

At Grade 3 there was a difference of 10 points in mean scores for boys, between control and experimental school scores, and the difference was significant at the .01 level, favoring boys from the control schools. For Grade 3 girls, mean scores were higher for girls from control schools, but there was no significant difference in scores.

In Grades 4, 5, and 6, mean scores were higher for students from the experimental school for Grade 4 boys and Grade 6 girls. Students from the control schools had higher mean scores for Grade 4 girls, Grade 5 boys and girls, and Grade 6 boys. No significant differences were found using analysis of variance for scores in Grades 4, 5, and 6.

For the year 1970 data were analyzed for Grades 2-6. Mean scores were higher for students from the experimental group for Grade 2 girls, Grade 4 girls, Grade 5 boys and girls, and Grade 6 boys. Mean scores for students in the control schools were higher for Grade 2 boys, Grade 3 boys and girls, Grade 4 boys, and Grade 6 girls.

When analysis of variance was applied to the data, there was a significant difference at the .05 level favoring Grade 3 boys from the control schools, similar to the results for 1969.

Scores for Grades 2 through 6 were analyzed for 1971. Mean scores for experimental pupils were higher than control school pupils for Grade 2 boys and girls, Grade 3 boys and girls, Grade 4 boys and girls, Grade 5 boys and girls, and Grade 6 boys and girls. When analysis of variance was completed, scores for Grade 3 and Grade 4 boys at the experimental school were significant. Scores were significant at the .05 level for third grade and the .01 level for fourth grade.

The last year for which data were analyzed was 1972. In 1972 mean scores from pupils in the experimental school were higher for Grade 2 girls, Grade 4 boys and girls, and Grade 5 boys and girls. Pupils from control schools had higher mean scores for Grade 2 boys, Grade 3 boys and girls, and Grade 6 boys and girls. When analysis of variance was applied to the data, scores were significantly different in favor of boys and girls from the control school in third grade at the .05 level. A summary of significant results from 1969-1972 showed the following:

Summary of Significant Results: 1969-1972

Reading Scores

YEAR	GRADE	FAVORED GROUP
1969	3	Control boys
1970	3	Control boys
1971	3	Experimental boys
1971	4	Experimental boys
1972	3	Control boys
1972	3	Control girls

Of the 38 grade and year comparisons made, four comparisons were significant for the control school pupils, two comparisons favored the experimental pupils. No consistent pattern was revealed which favored the pupils of the 200-day calendar school. The hypothesis that there is no significant difference in reading achievement scores of pupils who attend school for 200 days per year and those of pupils who attend school for 175 days per year when analyzed over a four-year period must be accepted. Since the results often occurred at the third grade level, there may have been difficulties related to the instrument used in that grade.

The conclusions of the study were as follows:

1. The additional 25 days of school provided by the extended school calendar did not influence significantly the reading achievement scores of elementary school pupils when compared over a period of four years.

2. When only significant differences in scores were considered, the additional days of school tended to influence the scores of boys more than girls.

3. When mean reading scores were compared between control and experimental groups, girls more often than boys were shown to be influenced by the additional days of school.

4. It appears that at the third grade level, pupils' reading achievement was more often negatively influenced by the additional days of school.

From the results of this study it appears that the extended calendar school should not be recommended on the basis that it will improve significantly the reading achievement of pupils.

The implications of this study are numerous. As school districts begin to look at extended calendar plans, they need to realize that extending the time spent in school will not lead to an automatic increase in achievement for pupils.

A study is needed which will determine the optimum time for instruction or at what time pupil learning and achievement begin to decrease. Also, there should be some determination of the content areas in which achievement increases due to extended schooling.

JC:mfs
75/76